

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently amended) ~~Isolated~~ An isolated polypeptide having trans-2-enoyl-CoA reductase (TER) (EC 1.3.1.44) activity comprising a polypeptide sequence selected from the group comprising
 - a) ~~the a~~ sequence as described by SEQ ID NO : 2, SEQ ID NO : 5, SEQ ID NO : 7, SEQ ID NO : 9 or SEQ ID NO : 11,
 - b) ~~sequences~~ a sequence having an identity of at least 60% to ~~the a~~ sequence as described by SEQ ID NO : 2, SEQ ID NO : 5, SEQ ID NO : 7, SEQ ID NO : 9 or SEQ ID NO : 11, and
 - c) a sequence comprising at least 10 consecutive amino acid residues of ~~the a~~ sequence as described by SEQ ID NO: 2.
2. (Currently amended) ~~Isolated~~ An isolated nucleic acid molecule comprising a sequence selected from the group consisting of
 - a) ~~the a~~ sequence as described by SEQ ID NO : 1, SEQ ID NO : 4, SEQ ID NO : 6, SEQ ID NO : 8 or SEQ ID NO : 10,
 - b) a sequence encoding a polypeptide as claimed in claim 1, and
 - c) sequences which under stringent conditions hybridise with a sequence encoding a polypeptide as claimed in claim 1.
3. (Currently amended) A method of increasing the total oil content in a plant organism or a tissue, organ, part, cell or propagation material thereof, comprising
 - a) ~~the transgenic expression of~~ expressing a polynucleotide SEQ ID NO : 1, SEQ ID NO : 4, SEQ ID NO : 6, SEQ ID NO : 8 or SEQ ID NO : 10 in said plant organism or in a tissue, organ, part, cell or propagation material thereof, and

- b) ~~the selection of selecting a plant organisms organism~~ in which - in contrast to or comparison with ~~the a~~ starting organism - the total oil content in said plant organism or in a tissue, organ, part, cell or propagation material thereof is increased.
4. (Original) The method as claimed in claim 3, wherein the TER protein is encoded by a nucleic acid sequence selected from the group consisting of:
- a) a nucleic acid sequence comprising a nucleotide sequence which is at least 60% identical to the nucleic acid sequence of SEQ ID NO : 1, SEQ ID NO : 4, SEQ ID NO : 6, SEQ ID NO : 8 or SEQ ID NO : 10;
 - b) a nucleic acid sequence comprising a fragment of at least 30 nucleotides of a nucleic acid sequence comprising the nucleotide sequence of SEQ ID NO : 1, SEQ ID NO : 4, SEQ ID NO : 6, SEQ ID NO : 8 or SEQ ID NO : 10;
 - c) a nucleic acid sequence which encodes a polypeptide comprising an amino acid sequence at least about 60% identical to the amino acid sequence of SEQ ID NO : 2, SEQ ID NO : 5, SEQ ID NO : 7, SEQ ID NO : 9 or SEQ ID NO : 11 and
 - d) a nucleic acid sequence which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO : 2, SEQ ID NO : 5, SEQ ID NO : 7, SEQ ID NO : 9 or SEQ ID NO : 11 or wherein the fragment comprises at least 10 contiguous amino acid residues of the amino acid sequence of SEQ ID NO : 2.
5. (Currently amended) ~~A~~ The method as claimed in claim 3 ~~or 4~~, wherein the plant is an oil crop.
6. (Currently amended) ~~A~~ The method as claimed in claim 5, wherein the total oil content in ~~the~~ seed of a plant is increased.
7. (Original) An expression cassette comprising in combination with a regulatory sequence a nucleic acid sequence selected from the group consisting of:
- a) a nucleic acid sequence comprising a nucleotide sequence which is at least 60% identical

- to the nucleotide sequence of SEQ ID NO : 1, SEQ ID NO : 4, SEQ ID NO : 6, SEQ ID NO : 8 or SEQ ID NO : 10,
- b) a nucleic acid sequence comprising a fragment of at least 30 nucleotides of a nucleic acid sequence comprising the nucleotide sequence of SEQ ID NO : 1, SEQ ID NO : 4, SEQ ID NO : 6, SEQ ID NO : 8 or SEQ ID NO : 10,
 - c) a nucleic acid sequence which encodes a polypeptide comprising an amino acid sequence at least about 60% identical to the amino acid sequence of SEQ ID NO : 2, SEQ ID NO : 5, SEQ ID NO : 7, SEQ ID NO : 9 or SEQ ID NO : 11, or
 - d) a nucleic acid sequence which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO : 2, SEQ ID NO : 5, SEQ ID NO : 7, SEQ ID NO : 9 or SEQ ID NO : 11 wherein the fragment comprises at least 10 contiguous amino acid residues of the amino acid sequence of SEQ ID NO : 2,

wherein said regulatory sequence is capable of mediating expression of said nucleic acid sequence in a plant.

8. (Original) An expression cassette according to claim 7, wherein said nucleic acid sequence encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO : 2, SEQ ID NO : 5, SEQ ID NO : 7, SEQ ID NO : 9 or SEQ ID NO : 11.

9. (Currently amended) An expression cassette as claimed in claim 7 ~~or 8~~, wherein the promoter is a seed-specific ~~promoter~~ promoter.

10. (Currently amended) A genetically modified plant organism or tissue, organ, part, cell or propagation material thereof, comprising a polypeptide as defined in SEQ ID NO : 2, SEQ ID NO : 5, SEQ ID NO : 7, SEQ ID NO : 9 or SEQ ID NO : 11 or an expression cassette as claimed in ~~any of claims 7 to 9~~ claim 7.

11. (Currently amended) ~~A~~ The genetically modified plant organism as claimed in claim 10, wherein the plant organism is selected from the group of the oil crops consisting of Borvago

officinalis, Brassica campestris, Brassica napus, Brassica rapa, Cannabis sativa, Carthamus tinctorius, Cocos nucifera, Crambe abyssinica, Cuphea species, Elaeis guinensis, Elaeis oleifera, Glycine max, Gossypium hirsutum, Gossypium barbadense, Gossypium herbaceum, Helianthus annuus, Linum usitatissimum, Oenothera biennis, Olea europaea, Oryza sativa, Ricinus communis, Sesamum indicum, Triticum species, Zea mays, walnut and almond.

12. (Currently amended) ~~The use of a genetically modified plant organism or tissue, organ, part, cell or propagation material thereof as claimed in claim 10 or 11~~ A method for the production of triacylglycerols, diacylglycerols, monoacylglycerols, phospholipids, waxesters and/or fatty acids or derivatives of the above comprising using a genetically modified plant organism or tissue, organ, part, cell or propagation material thereof as claimed in claim 10.